

## CLAIMS:

1. A sliding-window decoder for decoding at least one block of symbols and comprising a processor-system for processing main-windows each comprising one or more symbols and for processing prolog-windows each comprising one or more symbols, which processor-system comprises:

- 5 - at least one prolog deriving process for deriving at least one initial parameter for at least one prolog-window,
- at least one main deriving process for deriving at least one main parameter for at least one main-window thereby using at least one initial condition defined by said at least one initial parameter, and
- 10 - at least one generating process for generating at least one data estimate value by processing said at least one main parameter,
- wherein said processor-system comprises:
- at least one defining process for defining at least a first prolog-window comprising a first number of symbols and at least a second prolog-window comprising a
- 15 second number of symbols, which first number and second number are different from each other and unequal to zero.

2. The sliding-window decoder according to claim 1, wherein said defining process further defines at least a third prolog-window comprising a third number of symbols, with said first, second and third prolog-windows neighboring the same main-window in a

20 first, second and third iteration, and with said first number being smaller than said second number and with said second number being smaller than said third number.

3. The sliding-window decoder according to claim 2, wherein said first, second

25 and third prolog-windows are prolog-windows in subsequent iterations in a forward/backward direction with said first, second and third prolog-windows being situated before said main-window in the forward/backward direction.

4. The sliding-window decoder according to claim 2, wherein said first number has got a minimum value and said third number has got a maximum value and said second number has got an intermediate value.

5 5 The sliding-window decoder according to Claim 5, wherein said sliding-window decoder is Maximum-A-Posteriori-based and/or Viterbi-based.

6. A system comprising an encoder for encoding at least one block of symbols and comprising a sliding-window decoder as defined by Claim 1, wherein said encoder is a  
10 turbo encoder and/or wherein said sliding-window decoder is a turbo sliding-window decoder.

7. A processor-system for use in a sliding-window decoder for decoding at least one block of symbols and comprising said processor-system for processing main-windows  
15 each comprising one or more symbols and for processing prolog-windows each comprising one or more symbols, which processor-system comprises

- at least one prolog deriving process for deriving at least one initial parameter for at least one prolog-window, and
- at least one main deriving process for deriving at least one main parameter for  
20 at least one main-window thereby using at least one initial condition defined by said at least one initial parameter, and

wherein said processor-system comprises:

- at least one defining process for defining at least a first prolog-window comprising a first number of symbols and at least a second prolog-window comprising a  
25 second number of symbols, which first number and second number are different from each other and unequal to zero.

8. The processor-system according to claim 7, wherein said defining process further defines at least a third prolog-window comprising a third number of symbols, with  
30 said first, second and third prolog-windows neighboring the same main-window in a first, second and third iteration, and with said first number being smaller than said second number and with said second number being smaller than said third number.

9. A method for sliding-window decoding at least one block of symbols by processing main-windows each comprising one or more symbols and by processing prolog-windows each comprising one or more symbols, which method comprises the steps of:

- deriving, via at least one prolog deriving process, at least one initial parameter

5 for at least one prolog-window,

- deriving, via at least one main deriving process, at least one main parameter for at least one main-window thereby using at least one initial condition defined by said at least one initial parameter, and

10 - generating, via at least one generating process, at least one data estimate value by processing said at least one main parameter,

wherein said method comprises the step of:

- defining, via at least one defining process, at least a first prolog-window comprising a first number of symbols and at least a second prolog-window comprising a second number of symbols, which first number and second number are different from each other and unequal to zero.

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10. A processor program product to be run via a processor-system for use in a sliding-window decoder for decoding at least one block of symbols and comprising said processor-system for processing main-windows each comprising one or more symbols and for processing prolog-windows each comprising one or more symbols, which processor program product comprises

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- at least one prolog deriving function for deriving at least one initial parameter for at least one prolog-window, and

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- at least one main deriving function for deriving at least one main parameter for at least one main-window thereby using at least one initial condition defined by said at least one initial parameter,

wherein said processor program product comprises:

- at least one defining function for defining at least a first prolog-window comprising a first number of symbols and at least a second prolog-window comprising a second number of symbols, which first number and second number are different from each other and unequal to zero.

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